SHA
SCIENCE & HISTORY ALLIANCE

QUARTERLY
LOS ANGELES COUNTY MUSEUM/VOLUME 2 · NUMBER 2

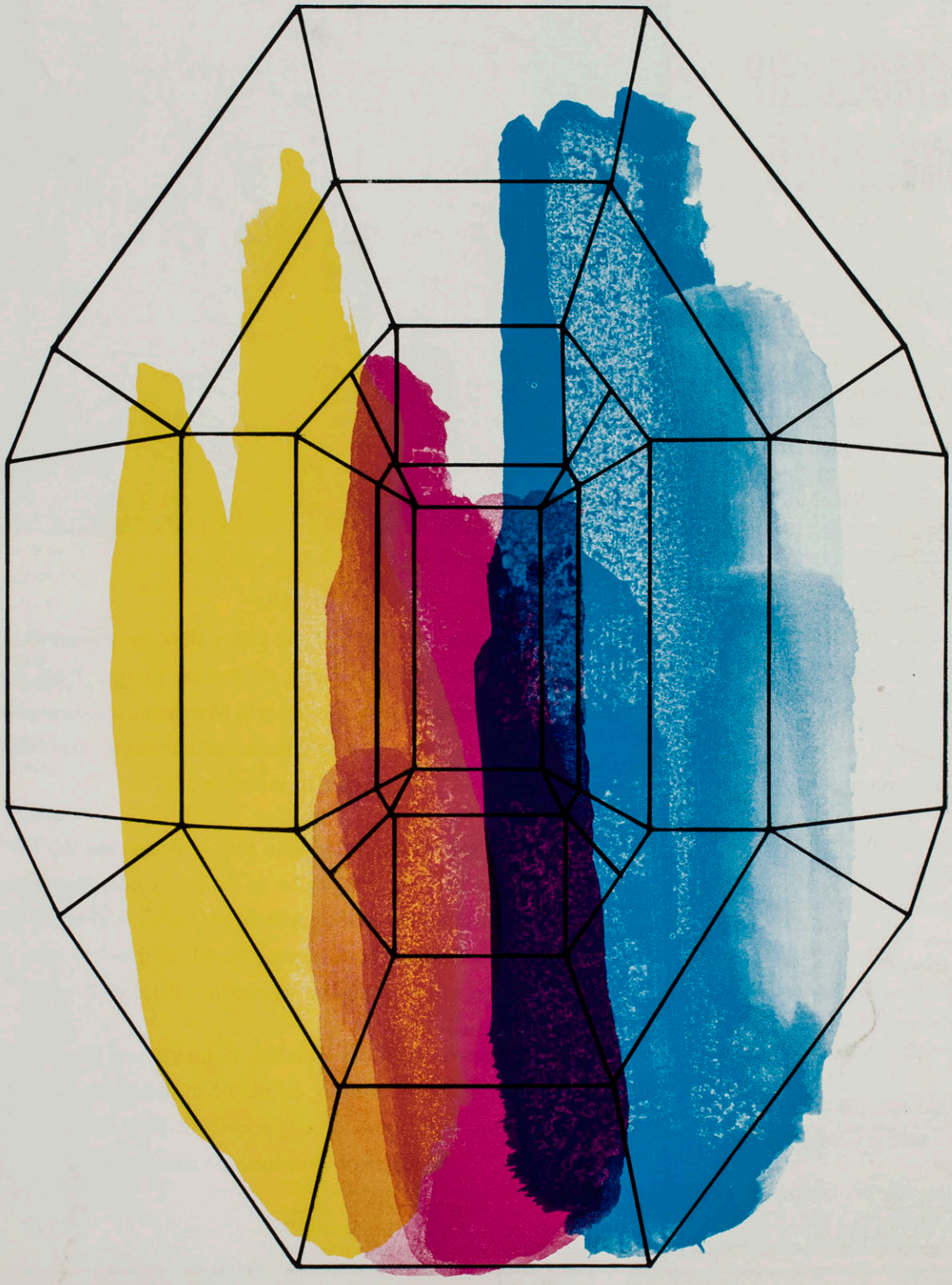
GEMS OF GEOLOGY

History Workshop

Vanishing Giants of Africa

China Poblana

Ord's Map of the Gold Regions



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MEMBERSHIP INVITATION

You are encouraged to invite your friends to enjoy the benefits of membership in the Science and History Alliance. An ever expanding program of benefits for children is currently being planned. The privileges and pleasures of membership are:

1. *A subscription to the Science & History Alliance* QUARTERLY
2. *The monthly Calendar of Events*
3. *Family participation programs*—NEW DIMENSIONS TO DELIGHT—*tickets available only to members*
4. *20% discount on most items at the Museum Bookshop*
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Memberships are available from $10 to $1,000. A descriptive brochure will be mailed upon request. RIchmond 8-2194.

SPECIAL EVENT

At this writing two hundred and eighty three happy members of the Science and History Alliance are touring Europe. Plans for this occasion were announced to members in March and a second plane was secured in June when an unexpected number of members had paid their fares in full.

Some of our members are staying in Britain during the full four week period, others are going as far as the Greek Islands and the Holy Lands. Members traveling with BOAC will reconvene in London for the trip back to Los Angeles. Members traveling with Air France will be returning from either Paris or London.

In an effort to assist our members in their travel plans for the future, a questionnaire is being circulated to determine their interests for the next three years. Seating priority on flights is determined by length of uninterrupted membership.

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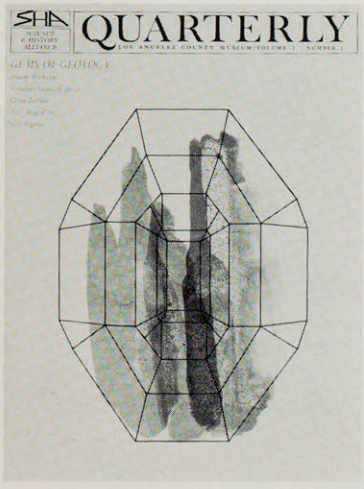

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GEMS OF GEOLOGY

A constantly growing collection

by Robert Gaal
Curator of Mineralogy

From the earliest times man has searched the rocks and the soil for the necessities of life. He soon discovered the vividly colored minerals and gems which he put to practical use primarily as metals and ornaments. The more extraordinary of these stones he held in awe and attributed to them wonderful powers—aesthetic, mystical, medicinal or magical. Today our Museum sustains this interest and wonder, as old as the human race, in its expanding collection of jewels from the earth.

Contrary to some popular belief, modern museums are *not* merely static repositories of the past, but are growing, dynamic organizations. The Mineralogy and Geology Section of our Museum is a remarkable example of such growth.

During the past year a vigorous gem and mineral procurement program has enabled us to acquire many prize specimens as illustrated on the adjoining color plate. This magnificent collection is growing largely through purchases by the Museum Associates, to a limited extent by County funds, and by gifts from private donors.

Public-spirited individuals such as the late William E. Phillips have enabled us to expand our Gem and Mineral Halls. The collection which he donated includes an example of sinhalite weighing 158 carats, the largest and best of this newly discovered gemstone in existence. With such support, perhaps in two years, the Los Angeles County Museum will have the finest gem collection in the western United States. By 1965 we anticipate that our new Gem Hall will be installed.

The *raison d'etre* for gemstones is that they delight the eye and possess beauty, durability and rarity. The Museum's enormous 450 carat blue-violet, faceted Kunzite is one of the largest and most beautiful of its kind in North America. The "Queensland Opal," 190 carats, and the "Grey Lightning Ridge Opal," 53 carats, will possibly represent the famed splendent opal of Australia in our collection. Two gloriously hued blue sapphires from Mogok, Burma, magnificent stones of yellow orthoclase from Madagascar, blue iolites and cat's-eye moonstones from India will be new additions.

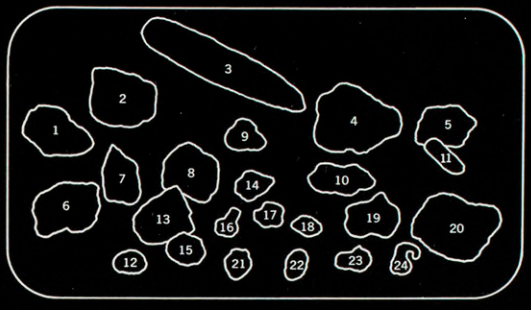
The search for rare and spectacular museum quality minerals specimens from all over the world goes on constantly. Our cinnabar crystal group from Kweichow Province, China, is a prize museum specimen. One of the largest crystals of vivianite in a North American museum is our twenty-inch-long beauty discovered in the Republic of Cameroons, Africa. It will soon be placed on permanent display.

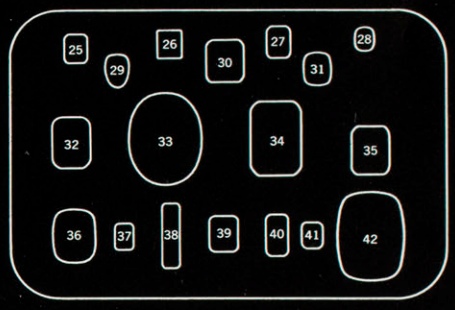
Other new additions to our collections are choice specimens of raspite and stolzite from the famous mining area of Broken Hill, Australia, native silver from famed Kongsberg, Norway, and proustite crystals from Chile. A fabulous crystal group of tourmaline and an exceptionally large and fine crystal of a new gem mineral, brazilianite, recently have been acquired.

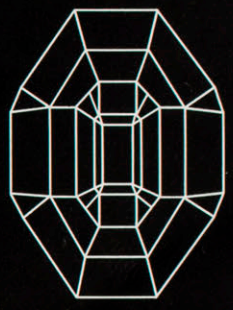
The active program in gems and minerals at the Museum contributes to the establishment of Los Angeles as the cultural center of the west in this field. Our purpose is to *obtain* and *preserve* the best gems and minerals available for present and future generations; to *display* significant and aesthetic materials from our collections so that they will be informative and interesting to the public; and to produce important *research* on our collection in order to augment the total knowledge in the geological sciences.

Friends and visitors interested in joining our growing program for gem and mineral acquisitions are invited to participate through the Science and History Alliance. Information may be obtained by writing the Executive Secretary, Membership-Mineralogy, Los Angeles County Museum, Exposition Park, Los Angeles 7, California.

1. *Columbite, Minas Gerais, Brazil*
2. *Bi-colored Beryl, Minas Gerais, Brazil*
3. *Vivianite, Cameroon, Africa*
4. *Calcite Geode, Tsumeb, S.W. Africa*
5. *Manganite, Ilfeld, Harz Mt., Germany*
6. *Brazilianite, Minas Gerais, Brazil*
7. *Quartz Pineapple, Ouray, Colorado*
8. *Lacy Cerrusite, Tsumeb, S.W. Africa*
9. *Rhodocrosite, Silverton, Colorado*
10. *Smithsonite, Tsumeb, S.W. Africa*
11. *Yellow Spodumene, Minas Gerais, Brazil*
12. *Molybdenite Rose, Kingsgate, New South Wales*
13. *Azurite, Tsumeb, S.W. Africa*
14. *Raspite, Broken Hill, New South Wales*
15. *Crocoite, Dundas, Tasmania*
16. *Stephanite, St. Andreasberg, Harz Mt., Germany*
17. *Emerald, Colombia S. America*
18. *Pyrargyrite, St. Andreasberg, Harz Mt., Germany*
19. *Dioptase and Calcite, Tsumeb, S.W. Africa*
20. *Hevlandite, Poonah, India*
21. *Proustite, Chañarcillo, Chile*
22. *Cinnabar, Klueichow Province, China*
23. *Minium, Broken Hill, New South Wales*
24. *Native Silver, Kongsberg, Norway*
25. *Iolite, 8 cts.*
26. *Green Zircon, 17 cts.*
27. *Brazilianite, 17 cts.*
28. *Sapphire, 7 cts.*
29. *Orthoclase, 31 cts.*
30. *Peridot, 122 cts.*
31. *Hiddenite, 43 cts.*
32. *Sinhalite, 158 cts.*
33. *Topaz, 1066 cts.*
34. *Kunzite, 450 cts.*
35. *Aquamarine, 125 cts.*
36. *Grey Lightning Ridge. Opal, 53 cts.*
37. *Euclase, 5 cts.*
38. *Euclase, 16 cts.*
39. *Euclase, 36 cts.*
40. *Euclase, 21 cts.*
41. *Euclase, 6 cts.*
42. *Queensland Opal, 190 cts.*







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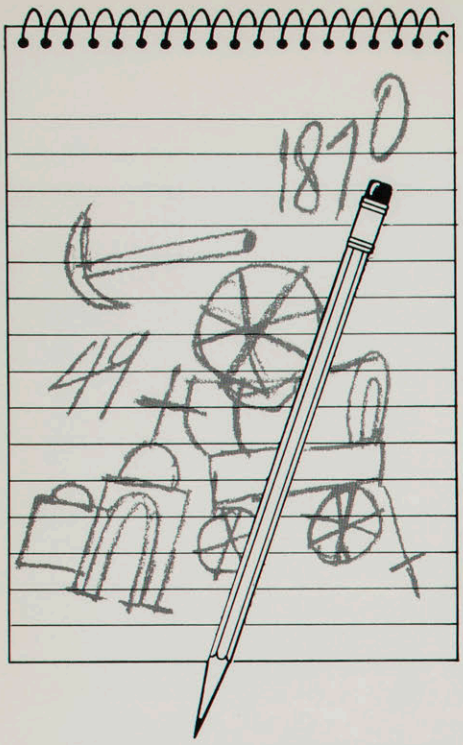


The Egyptian hall: Mankind's records can be studied from its beginnings on a gallery tour.

Workshop students study transportation's role in history.

HISTORY WORKSHOP

by JOHN BAUR
Museum Instructor in History

For several years the Museum has had workshops for students interested in science and art, but none in history. In this atomic and space age, human aspects of man's perilous existence need study. It is inevitable that young people seek answers by studying humanity's development. This is the business of history. Unfortunately, some schools disguise history as "social studies" or teach straight courses in the field without giving much time to individual attention and less for discussion of what history means, how historians work, or how museums identify, evaluate, preserve, and display historical objects. With little knowledge of what history entails, many students enter college vaguely contemplating a career in the social sciences. This workshop tries to clarify concepts for them. It also helps students meet professional people active in several fields of history, introduces teenagers to a history museum's many activities, and teaches them to approach an historical exhibition critically and appreciatively.

To achieve these aims, the Workshop must limit enrollment. Students of high scholastic achievement and genuine interest in history are encouraged to join. Nominations of 11th and 12th graders only are made by public and private senior high school teachers because a wider age and interest range would produce a membership too heterogeneous for any common basis for learning.

Students attend the program for thirteen weeks from 10 a.m. until noon on Saturdays. The first hour is devoted to discussing a specific subject, such as: "The Meaning and Use of History," "Writing History," "A History of History," "Historical Records," and "Your Future as a History Major." Members take notes, since in a year or so their success in college may depend largely on good note-taking during lectures. There is also ample opportunity for questions. Guest speakers frequently appear. These may include a curator, an historic-house administrator, perhaps an expert on old cars or costumes of the past, or a researchist in social history *via* newspaper files. Usually an older person who had experienced significant events is interviewed by all the students at once! This has turned out surprisingly well and is now a permanent feature. Students learn how to ask key questions, criticize the information they obtain, and write up the interview for hypothetical publication. Obviously, the program's pace changes almost constantly, revealing that history itself is multifaceted, requiring many kinds of individuals dedicated to its endless story.

The second hour is usually given over to a gallery tour, taking advantage of the museum's excellent holdings in history and science. Each gallery illustrates such major concepts as: the role of transportation in history, the importance of firearms, wild animals in the westward movement, symbolism through the ages, the theme of liberty and individualism, and man's varied spiritual story.

Field trips are made to important and accessible historic sites. Los Angeles County is rich in history, and these key places show how our knowledge of the past is enriched by an intelligent trek. The first is to Mission San Fernando, since so much occurred there. Other worthwhile sites near the mission are toured the same day, such as the William S. Hart Ranch, typical of a movie home of the "twenties," the Pioneer Oil Refinery of the 1870's, and the Oak of the Golden Dreams, where gold was first discovered in California. At the mission students visit a building preserved and others restored from data carefully gathered concerning their original appearance. If there is a second field experience, it is to a site of as different significance as possible, such as the Los Angeles County

Field trip of the History workshop to the San Fernando Mission, Saturday, November 3, 1962.

Graduating class of the History workshop of the 1961 program, Los Angeles County Museum.

Arboretum where Hugo Reid's adobe ranch house and "Lucky" Baldwin's Queen Anne cottage can be seen. During these trips, the atmosphere is informal. Students bring lunches and have a leisurely opportunity to become acquainted with their peers, exchanging ideas with others of similar interest whom they might otherwise never meet.

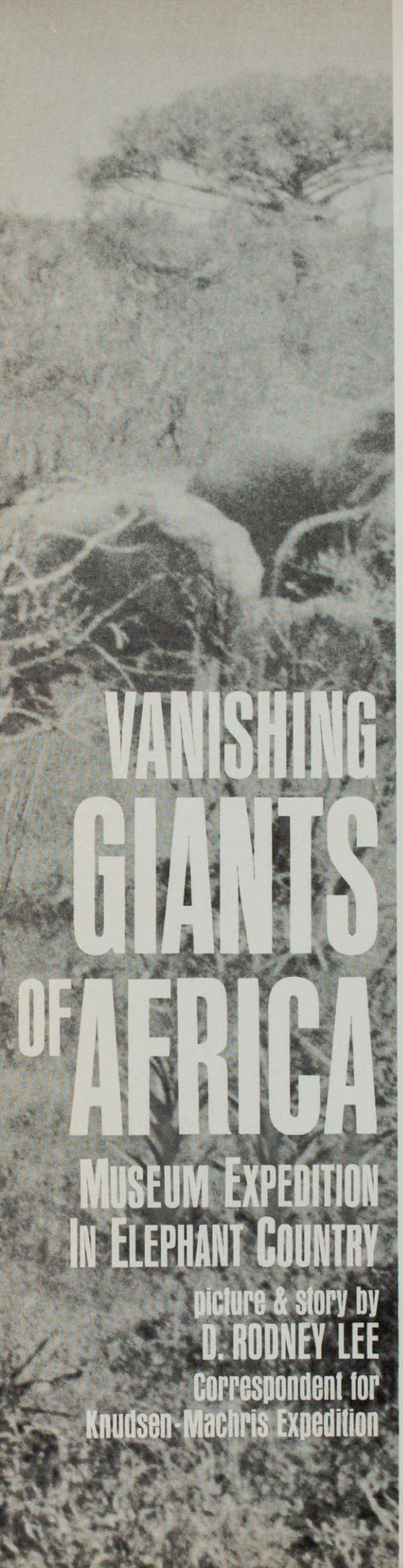
Back at the Museum, students attend behind-the-scenes tours, especially one by Ruth I. Mahood, Chief Curator of History, who introduces them to the armor room and other storerooms of the history division, meanwhile explaining the several roles a curator plays of which the public never dreams. Most students report this experience the most exciting of all workshop events!

Of course, members soon discover that the workshop's emphasis is on *WORK!* First, they write a short paper on the part played by their family or community in history. This requires thinking, and the results have shown originality. The second assignment is the aforementioned mass interview followed by a "post-mortem" discussion the next week, and the students' write-ups later. Then they each seek out a teacher, friend, relative, or community leader and prepare an interview of their own. The final paper may be on any topic in history. It is graded on the choice of an appropriate subject as to originality and importance, the student's limitation of its scope to the six weeks' period he has to write, and the availability to a high school student of pertinent information. Students have rated high in choice of topics. Most important, one is graded on his gathering, criticism and uses of evidence, and his conclusions based on what he has learned.

Some of this work may seem a grind for young people, and yet several students would like even deeper coverage, especially stressing the scientific method applied in writing history. Some of them return for a second semester in the "History Seniors' Roundtable," a discussion group which studies current world events on the basis of their origins and implications. All this requires delving into the past, the "roots" of today. Students both organize and run the program the second semester.

After 3½ years of the workshop, what conclusions can be drawn? We have gained a good cross-section of public and private high school students of many backgrounds and a wide geographical coverage of the county, even from areas far from Exposition Park. Questionnaires anonymously answered by students the last meeting of the semester offer us suggestions for improvements. Most young people have been pleased, and their criticisms show wisdom and interest. So far, behind-the-scenes tours prove popular and certain gallery talks rate high, because of the emphasis in learning how to deal with historical objects. Field trips are not as popular, because of the distance and time involved. The average enrollment has remained low, but since the workshop is not a form of assembly-line inculcation and receives no grade-credit from the school systems, this is probably just as well.

Those students who participated in the first workshop graduated from high school long ago. They have gone on to college, but whether the workshop will have any lasting influence on their careers, only *more* time will tell. Where we are pessimistic, we have changed both the content and the student activities, and will continue to do so, for even at this late date, the unique workshop program is still an experiment, which teaches its directors at least as much as the students learn!



VANISHING GIANTS OF AFRICA

MUSEUM EXPEDITION IN ELEPHANT COUNTRY

picture & story by
D. RODNEY LEE
Correspondent for
Knudsen-Machris Expedition

To the uninitiated a "Museum Expedition" may conjure up visions of bespectacled scientists grubbing in mouldy swamps for rare insect larvae, or recording the temperature of Nile crocodile eggs at two a.m. on a moonlit night. While such research goes hand in hand with scientific inquiry, a museum expedition is, in reality, a highly organized group of normal people with the hopes and fears, the likes and dislikes of the average man.

The Knudsen-Machris Expedition for the Los Angeles County Museum, recently returned from East Africa, was such an organization. It accomplished everything it set out to do. Its statistics show that future generations of Museum visitors interested in the natural history of the world will be endowed with habitat groups of five elephants, two giraffes, and four chimpanzees.

Of equal importance, though less spectacular for exhibits, are the thousands of rare, small mammals, birds, reptiles and insects which the group collected. These will swell the Museum's enviable list of specimens now available to science and the public for study purposes.

FUTURE OF AFRICAN WILDLIFE

Behind the statistics is the living story of an expedition of people with a purpose: to obtain specimens of East African fauna now threatened with eventual extinction. The threat to African wildlife is real and growing. It arises not from hunting or collecting expeditions, but from the inexorable press of the African population explosion coupled with ignorance of, or disinterest in, modern conservation methods.

Few men are better qualified to know this than Tom Knudsen and Maurice Machris, leaders of the expedition. Their frequent and extensive safaris into the area have given them accurate comparative data on the speed with which the balance of nature is being upset. This imbalance always occurs when large native populations move into virgin lands.

It is not just the so-called "game animals" which are disappearing, they say, but the whole complex of the land-animal relationship which is changing from the roots of the plants to the treetops. The change is total and embraces every living thing that dwells between them. In the process, the remaining wildlife is forced into protected parks causing massive overcrowding, or it withdraws into remote pockets which often bear little resemblance to its former habitat.

COLLECTING TO PRESERVE HISTORY

These then are the reasons that gave a sense of urgency to the expedition. Together with political uncertainties, changing habitat conditions made it entirely rational to collect family groups of even the rare animals when the preference is always to preserve alive every animal in a species threatened with destruction.

Many of the animals and birds obtained are at the present time not only plentiful, but numerous enough to endanger less hardy species. Like the American Bison, one day there are too many of a species to suit Man and the next day there are practically none.

This is especially true of the bush elephant. In many places such as Tsavo National Park and Murchison Falls, the overwhelming concentration of elephant herds are turning thousands of square miles of protected forest-grassland into treeless plains or, even worse, into barren wasteland. The process takes place in three stages: first the elephants kill the trees by removing the bark of the trunk for food; then, as happens nearly every year, fire sweeps across and burns the dead trees. Finally there is nothing but grass which is only a minor source of food to elephants, and the herds move on to destroy new areas.

The expedition collected entirely in areas of Kenya and Uganda which are open to anyone with a hunting license. With the special cooperation of the government and game departments of both countries it was possible to obtain the female and young elephants not usually targets of hunters. The seemingly endless bush country of Central East Kenya, between the Tana and the Galana Rivers contains some of the largest elephant herds on the continent. It was there that the elephant family group was obtained for the Museum. Nevertheless, *at the same time, and in the same place* teams of surveyors were driving stakes into the ground to mark sites for future irrigation and land development schemes.

The thin bank of fertile soil and riverine gallery forest along the Tana River is home to thousands of little known birds and small mammals: monkeys, baboons, civet, genet, duiker, bats and reptiles. It serves as a last-ditch refuge for all the

plains animals such as elephant, antelope, gazelle and buffalo, and it protects the river dwellers — hippo, crocodile and the myriad waterfowl and waders that line its banks.

Yet at the current rate of population growth along the Tana River, the entire forest strip will have been put to the axe and plow within ten years.

In Uganda the glittering steel blade of the bulldozer is being driven through the rain forest to make a new highway over the exact location in the Kibale forest where the expedition camped to obtain the family of chimpanzees and numerous monkeys and birds. Along every path and track lone *shambas* (peasant farms) and even villages are springing up where five years ago the only sounds in the forest were the "chunnk-chunnk-chunnk" of the white colobus monkey, the call of the birds, or the bark of a chimpanzee.

For all this stirring of the future, reminiscent of our own American frontier and the eventual disappearance of our main wildlife resources in the face of inevitable progress, East Africa is still largely primitive. Any member of the expedition will readily testify to that.

British-built Landrovers and Bedford trucks, all four-wheel drive, spent as many hours crashing through virgin bush country or slogging it out in hub-deep "black cotton" mud as they did on any semblance of roads. The weather and geography covered the whole range from jungle to desert; from the searing, breathless plains and mountains of Northern Kenya to the steady drum of rain torrents sluicing off tent-flys in the perpetual rain forest of Western Uganda.

EXPEDITION LARGEST IN YEARS

By any standards the Knudsen-Machris Expedition was a big one. In addition to Tom and Valley Knudsen and Maury and Paquita Machris, there were three others from Los Angeles: George Adams, Chief Taxidermist at the County Museum, this writer, and Harry Burrell, expedition cameraman.

John Williams, noted ornithologist and author from the Coryndon Museum in Nairobi, was on loan to the expedition with his entire staff of native skinners, a botanist, and all the field equipment necessary for the preparation of birds, bats, butterflies and other insects, reptiles, and plant specimens. With three professional hunters from Ker & Downey Safaris Ltd. and all the drivers, cooks, trackers, skinners and camp personnel, the entire group numbered over sixty people.

NATIVES MYSTIFIED

To an African accustomed to a "normal" hunting safari, the expedition must have seemed like a group of people from another planet. Certainly people had to be from another world to take more interest in the skins and feathers of birds than the meat; to spend days and hours stringing Japanese mist nets from the tops of trees and across rivers a hundred yards wide just to catch bats; to kill chimpanzees and then put bandages on their heads and pour hot wax over them!

It was difficult to try to convince these practical Africans that there was a reason for collecting the countless bundles of grass, useless thorn bushes, bags of elephant dung, brush chewed by elephants, or for climbing one out of a thousand acacia trees to cut off one particular branch that had no visible use or living occupant. They would never have understood that all of these things were going to be shipped half way around the world to a museum to become part of the most authentic elephant and chimpanzee habitat exhibits the world has ever seen.

Ignorance of the importance of these new exhibits at the Museum is not limted to the native African. Few people in Los Angeles County today have any idea of what enormous educational value the exhibits hold for future generations. Modern taxidermy, as developed at our own Museum by George Adams and others, insures the specimens of almost perpetual existence. Barring acts of God or man-made destruction, the elephants now on their way to the Museum will be on display for hundreds of years.

There is no guarantee that in the year 2163 there will be a single live African elephant in existence either in the wild or in zoos. It is safe to say, however, that according to current figures of attendance at the County Museum, as many as *two hundred million* people will have seen the exhibits by that date. They will have been able to study the Museum specimens in what should be termed a "living" habitat group because every detail of the landscape, plants, flowers, birds and small mammals, even a waterhole as it exists today, will be preserved for posterity.

ELEPHANT HUNTING: EVERYTHING COUNTS

If the native African couldn't understand the implications of the expedition, he most certainly understood *Ndorfu,* the elephant. Five elephants meant five feasts. It meant hundreds of pounds of protein-rich dried *biltong* (strips of dried elephant meat) to take home in sacks to feed his family when the expedition was over.

It meant tracking a herd for days on foot; then returning to a specified place to report on the size, weight, sex and height of each animal in the herd; the number in the herd and countless other details. These he intoned in his sing-song Swahili to the professional white hunter as casually as though he had stepped across the street instead of walking a hundred miles in temperatures over one hundred and ten degrees, through cruel thorn bushes with only a sheath knife to protect him from wild animals.

Finally it meant directing Maury or Paquita Machris or Tom Knudsen and their professional hunters to a place where they would be reasonably safe while observing the herd for a possible museum specimen.

The stereotype picture of the frightened native bolting in the face of an elephant charge is the figment of some writer's imagination. Most of the trackers with the expedition were either Waliangulu or Wakamba tribesmen who have hunted elephants for centuries. They have as healthy a respect for an enraged elephant as anyone who has ever been charged by one, but they are brave people.

On one occasion, Maury Machris' hunting party was stampeded by approximately two hundred and fifty elephants in full panic. For over seven minutes the herd thundered and trumpeted past the tree under which they were parked. At the last second the herd opened its ranks in front of the tree, then reformed into a solid mass when it was past. Not a soul budged, white or native, as the thrilling spectacle unfolded. Afterward the professional hunters agreed it was a sight few persons had ever witnessed, nor were they likely to again.

Not only was this stampede witnessed, but on that day as on countless others, both motion picture and still cameras were whirring and clicking. From thousands of feet of film and hundreds of still

TOPOGRAPHICAL SKE
of the
GOLD & QUICKSILVER DIS
OF
CALIFORNIA
July 25th 1848.
E. O. C. O. L. U. S. A.
Scale of geographical Miles
SIERRA NEVADA OR SNOWY MOUNTAINS
SACRAMENTO Bare Plains
Pass to Salt Lake
Pass to Salt Lake
Gold found on this Creek
Gold found on this Creek
Pablo Bay
Suisun Bay
Carquines Straits
Bay of San Francisco
PACIFIC OCEAN
Plains
Plains
Plains
Live Oak

pictures, the expedition was able to amass information that tells volumes about the habits and habitat of the African elephant.

With all these pictures, the Museum staff will be able to recreate identical conditions in its exhibit. We know now that elephant families stay together even when the herd is in full panic, that mothers herd their babies along only as fast as the baby can travel for long distances. We know the relative positions in the herd of the big bulls, the young bulls and the older and younger calves. We have pictures of them browsing when they are totally unaware humans are watching them. We have close-up pictures of the grasses, flowers and trees they have fed on. In short, there will be no guesswork in working out the new exhibit.

LIFE IN THE BUSH

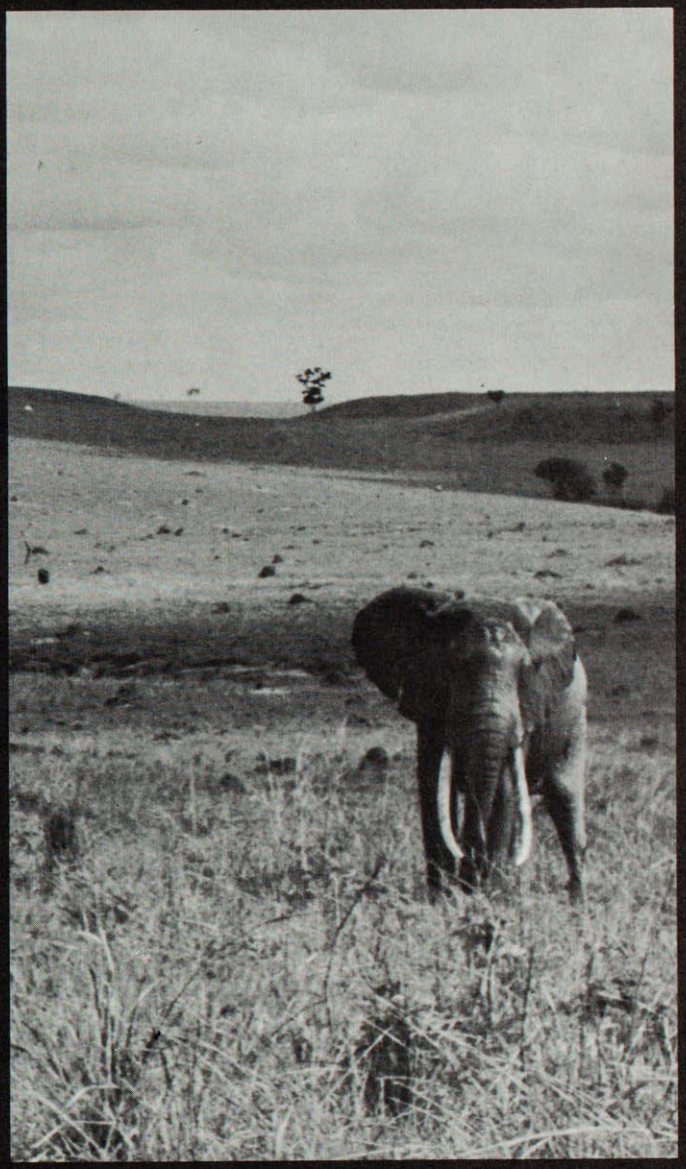
A museum expedition is really a matter of people. While each person was qualified to perform certain specialized tasks for which he was chosen in advance, no one could guess the divergent projects that would occupy his time as the months rolled on as though they were days.

An expedition into unknown country seems to bring out the best in people. Everyone puts up with conditions that would be unbearable at home, and in doing so the whole group becomes a tightly-knit community in which each person becomes dependent on all the others for his or her personal well-being. Serious complaints are practically non-existent.

This is especially true of the women. Granted, Valley Knudsen and Paquita Machris are veterans on safaris, but baths in rust-red river water, safari ants and scorpions in the tents, flour-like dust from eyebrows to boot tops, or water up to their ankles in the dining tent—these are things one doesn't usually ask the women to endure. Yet they took it regularly. Everyone knew their scratches, bruises and bites hurt and itched as much as the men's, but they seldom mentioned it.

Two major considerations determined the day to day living of each person on the expedition. The first was to complete the long list of requests supplied by the Museum staff in Los Angeles, including the recording on motion picture and still film whatever scientific data might be of help in addition to carefully scribed notes. The second was to contribute

Elephant damage: first stage, Murchison Falls Uganda. Trunks of trees have been stripped of bark and trees are dead.



Final stage, Elephant damage, Murchison Falls Uganda. Lone bull in hundreds of acres totally devastated, first by elephants and then by fire. This was once heavy forest-grassland.

MUSEUM SPOTLIGHT

NEW ACQUISITION

A recent addition to the collection of the History Division is the melodeon played at the wedding of Vital Ferdinand Vignes and Emillé Coulson at the Plaza Church, Los Angeles in 1860. It was Jean Luis Vignes, an uncle, who, with Pierre Sainsevain, established a successful wine business in southern California in the early 1850's. (see book review).

CURATOR ON STATE COMMITTEE

Ruth Mahood, Chief Curator of History, was recently appointed by Governor Edmund G. Brown to a statewide committee to plan the observance of the first annual "Read California History Month" during September.

AWARD OF SECOND GRANT FOR PORPOISE RESEARCH

The Division of Life Sciences announces the award of a research grant from the National Science Foundation to the Museum Associates. The grant was made for the purchase of sound analysis equipment to be used in research on porpoise behavior by Dr. David K. Caldwell, Curator of Ichthyology, and his wife, Melba C. Caldwell, Research Associate. The Caldwell's research is being supported in part by a grant from the National Institute of Mental Health.

HOLIDAY LECTURES SERIES

During Easter Vacation the Museum had the rare opportunity of inviting four hundred high school students from the County to attend a series of lectures arranged and financed by the National Science Foundation through the auspices of the American Association for the Advancement of Science. The speaker for the four lectures was Dr. Theodosius Dobzhansky, noted research scientist in the fields of genetics and evolution.

In a day and geographical area when most young people rush to the shore and desert during the spring vacation, it was unique to find an earnest group of young scientists willing to give up their vacation to make the long journey to the Museum each morning to spend two hours listening to Dr. Dobzhansky and discussing current problems in the field of genetics. At the close of each session, the speaker was surrounded with several dozen students, eager to hear more and to pursue various questions further.

The general subject discussed was "Heredity and Man's Nature." This was broken into four lectures: "The Nature of Heredity," "Variety of Human Natures," "Genetic Loads and Radiation Hazards" and "Whither Mankind?"

The program was presented to lead the students gradually into an introduction to the terminology, a review of the history of research in the field and an understanding of present work being done in the field in the light of recent biochemical discoveries. The last lecture was an excellent survey of the philosophical implications of evolution and genetics. Dr. Dobzhansky suggested that evolution has provided us with qualities capable of developing ethical structures. He held the optimistic attitude that mankind and all the universe is evolving upward and man may hold an increasing hope for the continuance and development of the beautiful and good. He viewed creation as a long process which gives hope for an enlightened future—brings meaning and dignity to the individual, to mankind, and to the biological world as a whole.

Dr. Dobzhansky is an outstanding geneticist and professor at the Rockefeller Institute, who has trained geneticists now working all over the world. His books are famous, and he is well-known as a lecturer and scientific investigator. He has received many awards and honors throughout his long life.

NEW FACILITY

The completion of the new vertebrate paleontology facility initiated a big moving project which illustrates the great need which has existed for this additional office and laboratory area. When the specimen storage room was approved for occupancy early in July fossil materials were brought from the sub-basement, a large basement storage room and from the hallways of the third floor. Many animal skeletons intended for comparative studies were taken from hidden corners throughout the building and are now accessible to research students and staff for the first time in many years.

With the completion of this new facility the Museum is justly proud of the most modern vertebrate paleontology work area in the country. In preparation for the expanded research and exhibition programs now underway two curators and two preparators have been added to the staff. The current program includes mounting a dinosaur skeleton to go on exhibit in 1965.

November 6 has been set for the dedication ceremony and open house in connection with the new facility.

RESEARCH ASSOCIATE APPOINTED

Mr. Robert Weinstein has been appointed Research Associate in Western History to develop the photographic collections of the History Division. A recognized authority in this field, Mr. Weinstein will assist in the expansion of existing collections, acquiring additional materials, identification, cataloguing,

wherever possible to a smooth-running camp. When the two considerations became totally meshed like a set of gears, then the whole effort ran like a Swiss watch.

Much of the smoothness of operation stems from the Safari organization itself. The term "professional white hunter" is a misnomer. Unlike many of the rustic-type "guides" that many hunters and campers are accustomed to in the United States, the professional hunter is all things in one: circus manager with a tent city on his hands, employer of sixty to seventy specialized natives; employee, friend, advisor, game warden, chauffeur and guide of the client; super mechanic, radio operator, naturalist, navigator and official crying towel if need be; gunsmith, tracker, interpreter, humorist, whip-cracker and witch doctor et al.

A CAMP IS BUILT

Picture a seven acre plot beneath towering croton trees in the riverine belt along the Tana River. The ground is fairly open but numerous scrub bushes the height of a man dot the area. Into this semi-clearing rolls a stream of dust-caked, mud-spattered Landrovers followed by four Bedford ten-ton trucks loaded ten feet in the air with equipment and topped by masses of grinning, laughing natives. While Museum Expedition members pile out and stand by watching in amazement, the professional hunters become generals.

In a matter of minutes all the brush has disappeared. Flashing bush knives (pangas) remove the lower branches of trees. Over near the bank of the river, with shade for midday and the hint of a breeze, the Machris and Knudsen tents are going up. Not far away in the spot where the dining tent is half finished, a team of natives are struggling to unload two massive kerosene-operated refrigerators. Beyond them the cooks have started a huge fire from which the coals will come for their charcoal cooking banks.

Farther back in the shade of more trees eight other forest green tents are going up with military precision. As though planned by an architect, each man has his own tent situated to suit his particular needs. As part of the overall plan, the expedition members are grouped together. Beyond them are the professional hunters, discreetly set apart, but with a view of the whole operation. At the far end of the line, a good two hundred yards from the living and eating areas, the skinning and collection-storage tents go up to house the precious skins, birds, and other specimens.

Within hours the enormous mounds of bales, boxes, crates, baggage and paraphernalia have resolved from chaos into the order of a permanent camp. Each living-tent has become the new home of its owner with its servant-attendant busily sweeping the ground around it using a broom made of leaves.

Outside, shaded by the tent-fly that extends over the tent proper, is a solid table-desk and canvas "director's chair." The table contains neatly folded bath linen, a water bottle filled with boiled, filtered water, shaving mirror, flashlight and Coleman lantern. To one side is a three-legged canvas washstand filled with river water and topped by a plastic basin. A short clothesline reaches a nearby tree.

The tent proper is completely enclosed. A canvas floor is part of the tent. Every opening—mosquito-net windows, front, back and sides, tent flaps and floor —can be zipped to make it insect-proof when closed. A soft, woven mat stretches before a rugged folding metal bed which boasts crisp sheets, woolen blankets, pillow and case neatly made over a thick mattress. The bedside table has been covered with a fresh cloth. Against the side of the tent, the owner's personal baggage and equipment has been neatly stacked on cut saplings to keep it off the ground.

To one side of each pair of tents stands an ingenious shower arrangement. A large canvas bucket fitted with a shower-head hangs by a rope through the crotch of a tree over a four-sided canvas enclosure with slatted wooden flooring. The bucket is lowered and filled with water heated over an open fire, raised and swung into place where the bather can turn a small valve to start the water flowing. Equally well-equipped, the latrines are set out of sight at the end of carefully cleared paths behind the tents.

When all the supplies except fresh meat had to be carried on trucks through the bush, it seems incredible that meals cooked on banks of coals in the open, rain or shine, could be presented as they were. Dinner was the one meal when everyone was present. At the Tana camp the Machrises, Knudsens and seven others were present every meal. Often the number went as high as thirteen or fourteen with visitors from the Game Department or local officials.

The evening started with regalements at six-thirty after everyone had bathed. Always the last to arrive, John Williams, the ornithologist, would burst onto the scene and enthusiastically describe an extremely rare bird which the day had produced.

The soft light of lamps on the long table in the dining tent added elegance to full course dinners of soup, freshly baked bread, green vegetables with cream sauce, roasted potatoes and broiled antelope, or sometimes baked fish from the river, ice tea with *real ice,* followed by a magnificent lemon meringue pie which the chef had managed over the open fire.

Coffee time was the signal for Maury Machris and Tom Knudsen to outline the plans for the following day and assign projects to each person. They would go over reports from the hunters and trackers on concentrations of elephant herds, likely spots to put up bird nets; other expedition business. By nine-thirty camp was asleep—silent except for the distant roar of a lion or the chuckle of a nearby hyena.

THE OTHER SIDE OF THE COIN

This idyllic routine was fairly usual. Lest anyone get the impression that life in the bush is like staying in a motel a half-mile from the San Diego Zoo, assuredly it is not. At times sudden tropical storms brought the trees crashing on all sides and flattened tents like crushed match boxes. At the camp in Uganda's Kibale forest, the Knudsen's tent was nearly marooned by millions of safari ants. The rain and resulting mud was constant. Even when the rain stopped for short periods, the dripping forest continued to soak into everything. Clothing and equipment were soggy for weeks.

At another camp evenings brought clouds of insects crashing into the lamps, crawling down necks and up pant legs, and plopping into the soup. In the Bwamba forest on the Congo border, the rains put out all the fires and there was no cooking for twenty-four hours. In retrospect, these incidents seem to add spice to the fascination of an expedition and perhaps are part of the reason adventurers like the Machrises and the Knudsens keep going back.

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1. Pictures are an important part of making a "living" habitat group absolutely authentic.

2. Tony Archer, white hunter and student Ornithologist operating radio.

3. In the space of hours, enormous piles of paraphernalia have turned from chaos into an efficient, functioning camp.

4. Always teacher as well as world-famous ornithologist, John Williams allows youngsters to help prepare birds and bats for shipment to Los Angeles County Museum.

<4

JOHN WILLIAMS, BIRDS AND BATS

Possibly the most fortunate result of the careful preplanning that foreshadowed the Knudsen-Machris Expedition was the inclusion in the party of John Williams, Curator of Ornithology at the Coryndon Museum. As the leading authority in the world on the birds of East Africa, he has patiently trained numerous others, both white and native, to collect and prepare birds for the museums of the world. Tony Archer, professional white hunter also with the expedition, has worked with Williams for years. These two men working together made it possible for the County Museum to obtain a great new collection.

John Williams goes on the theory that while in the field, the primary objective is to collect specimens and prepare them on the spot so that the skins will last indefinitely. Research, identification and comparison can come later at the leisure of the scientist. He has been a resident of Kenya long enough to have seen the habitat of a number of species disappear completely and states positively that only a few years remain for many more of them.

As a result of these opinions, Williams maintains a staff of highly trained Africans who accompany him on his collecting trips. He welcomes others who are interested in becoming experts. One such African, Elias Nampunju, a native Tanganyikan who started with him a few years ago, according to Williams, now promises to be the leading native ornithologist on the continent. Williams feels that the only hope for the future is teaching the African the value of conservation before it is too late.

His enthusiasm for the work of the expedition was like a tonic permeating the whole camp, even to those who knew nothing of scientific collecting. At one time or another practically everyone accompanied Williams on his mad excursions into the bush. Only a person totally mad or divinely protected would drive through the African bush in a Landrover at ten to twelve miles per hour while looking through field glasses for birds off to the side or behind. He has been doing this for years and both he and the Landrover are still intact!

USES OF BIRD COLLECTIONS

To those who may not know the full use of the Museum's growing bird collection, to amateur bird watchers whose interest in the field is keen but who are not scientists, and to the average layman, some explanation of the need and desirability for collecting large numbers of birds from all over the world is necessary.

As is the case at the County Museum, there are two types of collections. First, specimens mounted and on display, are primarily for the enjoyment of the general public, enabling them to see birds so rare or so difficult to keep that they could not survive in zoos or aviaries. As an educational exhibit, it stimulates people to become interested in ornithology.

The second type of collection, by far the most important to science, is made up of study specimens of the type collected on the Knudsen-Machris Expedition. These specimens are tagged with minute details as to the location collected, stomach contents, age, sex, whether in breeding condition or not, state of plumage and other factors. From this information students all over the world are able to draw inferences regarding the biology of the various species far more accurately than before.

The reference collections as they are called, are available to scientists and qualified students on a loan basis much as the reference section of a library. For example, the only previous specimen of one of the family of swifts which Williams collected in the Moroto district of Northern Uganda, is in a Berlin museum. The new specimen will be sent to Berlin for a comparison. If they are not the same, it means that Williams has discovered a new sub-species of swift and that this single specimen will rest in the County Museum for comparison by any other museum.

According to Williams, the field of tropical medicine is now alert to the possibility that certain birds may have more than chance influence in the spread of certain viruses; that their niche in the balance of nature has been underestimated with respect to both harmful effects in some cases and beneficial effects in others. The same facts hold true for the various species of bats and many insects.

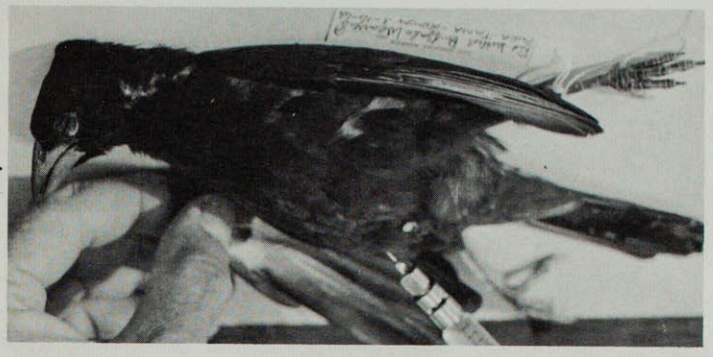
Collecting birds and bats on the expedition took up at least half of the available time. A most effective and certainly the most humane collection method was the use of Japanese mist nets. These are about the equivalent of a woman's hair-net, six to eight feet high and forty to sixty feet long. They are spread between the branches of trees or set on poles in dense forest close to the ground. Birds fly into the nets and are trapped. The nets are tended four times a day. If the bird has already been obtained, or is a variety not desired, it is released and flies away unharmed.

One of the main reasons for the success of the bird collectors on the expedition was due to the number of widely separated areas and geographical conditions where the camps were located. Between the Bwamba Forest on the edge of the Congo, the Kibale and Budongo Forests in Uganda and the Tana River in Kenya, every major habitat area in East Africa was penetrated.

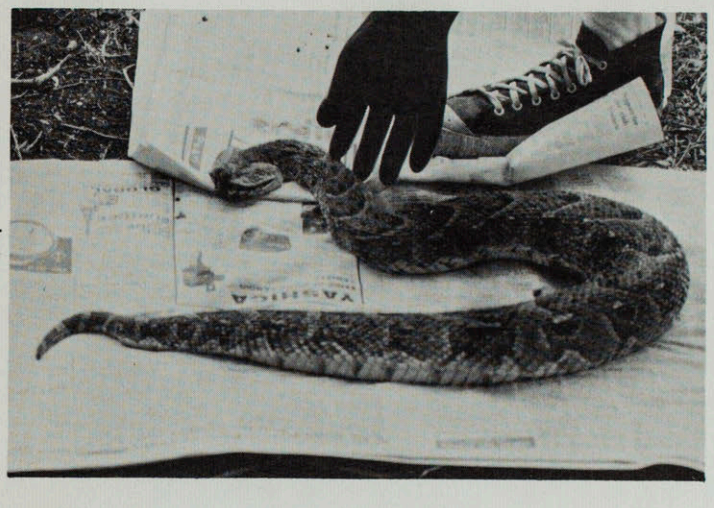
WORK TO BE DONE

Now the expedition is over. The work of taxidermist George Adams and others at the Museum is just beginning—a story in itself. The painstaking job of preparing the elephants, giraffes and chimpanzees and their habitats is a long and costly process, variously estimated at taking from five to eight years with the present Museum staff and budget.

Fortunately the giant step has been made in time, before changing conditions make it impossible to do any more collecting in East Africa. The expedition points up another far more important fact: the Los Angeles County Museum, with its Science and History Alliance, is a growing and potent force in the community. Along with the new Art Museum, the Music Hall and numerous other civic projects, it is proof that public-spirited citizens of Los Angeles are determined to put this city on a cultural level equal to, or better than, any in the world.



1. *Maurice Machris and Tom Knudsen with blue monkeys captured in Uganda's Kibale Forest. Rain, mud, and insects nearly drove expedition out.* 2. *Uganda's prime Minister Milton Obote greeting Maurice and Paquita Machris on occasion of opening of new zoo at Budo, made possible through the generous assistance of Mr. and Mrs. Machris.* 3. *Several birds required special handling and preservation for scientific study.* 4. *Five-foot deadly puff-adder struck at expedition member . . . ended up as specimen for Museum.* 5. *Tom and Valley Knudsen at Tana River Camp in Kenya. Bracelet of hairs from elephant tail on left wrist are proof of success.* 6. *Even when in full panic and running 15-20 M.P.H., family groups in a herd always stay together.*



The China Poblana

by JOHN DEWAR
Assistant curator of California History

Among the examples of dress on exhibit in the galleries of California history is the Mexican *China* (Cheena) *Poblana.* Its effectiveness is equalled only by its appropriateness for it is a colorful reminder of that period when all of this land was northern Mexico, and remains a part of that rich legacy of customs and language which we have inherited. The dress on the manikin is actually a composite of articles of clothing from a number of collections brought together as an ensemble to recreate as faithfully as possible the *China* as it was worn in this period of history.

The legends referring to the origin of the *China Poblana* are romantic stories with, undoubtedly, more than a modicum of truth; however, they leave much to be desired in the way of information for reconstructing the typical form of the dress. Roughly, they recount the story of an Oriental girl who arrived in the City of Puebla de los Angeles, Mexico, sometime in the seventeenth century, and whose dress was adopted as a style by the *criadas* or servant girls. She is buried in the little La Compania church next to the University at Puebla, and a dress purportedly hers is in the State Museum.

The dress, itself, is merely a variation of the Mexican woman's apparel of European derivation. Any influence of typically Indian articles such as the *enredo,* or wrapped skirt, the *huipil* and *quechquemitl* does not show. It seems that the very name itself has given rise to the need to explain so simple a dress. *China,* of course, means a Chinese woman and is also the feminine adjective for Chinese. *Poblana,* used either as an adjective or as a noun, is a woman of Puebla. This is the simplest rudimentary translation. But *China* has long signified a *criada,* or maid, as a *chino* was a manservant. The Nuevo Diccionario de la Lengua Castellana, 1847, lists *china*—p. Am. M. (Provincial de la América meridional) La moza india hasta que se casa. (Provincial de Mejico) La criada mestiza.

It is tempting to speculate on what part the city, as a flourishing industrial crafts center, played in the creation of the *China Poblana.* Certainly it was a propitious place for the growth of an indigenous style.

Esta ciudad (Puebla de los Angeles), que está situada en medio de un hermoso llano á 28 leguas de la capital hácia Vera-Cruz, ha perdido mucho de su requeza desde la independencia (from Spain in 1821). Su principal industria consistia en fábricas de paño, que todas han dejado de existir despues de la libre introduccion de los paños extrangeros, que á pesar del derecho que pagan, son mas buscados que los del pais.

Viaje Pintoresco y Arqueolojico de la Republica Mejicana. por Don Carlos Nebel, 1840, Mexico.

The skirt, which is perhaps the most characteristic part of the dress, was traditionally of a fine woolen baize called *bayeta,* or in Mexico, *castor.* The example displayed, which is from the Coronel collection, was of a natural white woolen flannel printed in red. The soft hue of a rosy crimson would indicate cochineal dye mellowed by years of service, for it has now attained that incomparable color one associates with a fine old Navaho *bayeta* blanket.

The design, which is in the original white of the cloth, consists of a flowered border along the bottom of the skirt, with an all-over pattern of polka dots above. A secondary color of pink was achieved by a tint of the same red dye. The original yardage was printed with the flowered design running along the side for it is edged selvage. The skirt is sparsely adorned with *lentejuelas,* or sequins of an old form. Now blackened by oxidation, they are, when cleaned, perfectly flat round copper discs with a small hole in the center, and are sewn to the cloth by means of a threaded glass bead. The sequins were apparently made from small loops of wire flattened by pressure for there is a vestige of a slit from the central hole to the edge. It would seem that they cut these exactly as silver loops are cut today in Mexico for necklaces. In the hills above the town of Taxco are the shops of silver artisans, each with its own specialty. There one can see them make these loops with the astonishing facility of the Mexican craftsman. A silver wire is wrapped tightly around a metal rod until it looks like a long screen door spring. By merely sawing the length of this "spring," it is reduced to identical rings of silver.

Besides the skirt, mention must be made of the *reboso* as a characteristic part of the dress. This long fringed shawl is one of the few old forms retained in Mexico. It is still manufactured in the old styles and usually of silk or cotton. In an account book (A. 3582-10) kept by Don Antonio Abila in Los Angeles with Abel Stearns, an ordinary *reboso* in 1841 cost six pesos and a silk *reboso* thirty-five pesos.

Whatever the origin of the *China Poblana* and whoever first popularized it, we know the mold was firmly set by the middle of the 19th century. It remained for a Scotch woman to set down concisely a description of the dress. Madame Calderon de la Barca, the former Frances Erskine Inglis, came to Mexico in 1839 with her husband, the first Spanish

The *China Poblana* in 1898 from *Modern Mexico.*

Envoy to Mexico. A vivacious woman with a sense of humor, her series of private letters was published under the title of "Life in Mexico," and remains the one graphic account of the incredible early years of Mexico's independence.

Puebla. 24th December, 1839

The dress of the Poblana peasants is pretty, especially on fete-days. A white muslin chemise, trimmed with lace round the skirt, neck, and sleeves, which are plaited neatly; a petticoat shorter than the chemise, and divided into two colours, the

Puebla de los Angeles.
Kiosko in the plaza,
1893. From a photograph.